

Bulkley. (L. D.)

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*J. L. D. Bulkley M.D.*

ON

UNUSUAL METHODS

OF ACQUIRING

SYPHILIS.

WITH REPORTS OF CASES.

BY

L. DUNCAN BULKLEY, A.M., M.D.,  
OF NEW YORK.



*presented by the author*

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**ON UNUSUAL METHODS OF ACQUIRING SYPHILIS,  
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THE subject which is indicated by the title of this paper is so vast, and relates to such a mass of facts recorded in literature, that it will not be possible to compass it at all completely, much less to consider exhaustively all the phases which it may present; indeed, the limits of the allotted time will permit of not more than a brief sketch of the general subject, and the elaboration of a few points, with the presentation of some illustrative cases.<sup>2</sup> The object of the paper is rather to call attention to the not infrequent acquiring of syphilis not only by means which are entirely innocent on the part of the sufferer, but also often in a manner wholly unexpected and generally quite unprovided against; it is also desired to provoke a discussion of the subject.

With the more general recognition of the non-venereal or innocent acquiring of syphilis, it will happen,

1st. That the dangers of the disease will be more

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<sup>1</sup> Read before the New York Academy of Medicine, January 17, 1889.

<sup>2</sup> It will also be impossible to present here the references to the various authors and writings on the subject, a full bibliography of which would occupy even more space than the article itself. These will be given later, in a fuller consideration of the subject.



widely recognized and guarded against, and so *fewer cases will occur*.

2d. Cases of syphilis will oftener be recognized when there is no history of venereal exposure.

3d. Less stigma will be attached to the disease, when it is well recognized that many acquire it innocently; and

4th. As a result of this last, syphilis may before long be placed, where it belongs, among the infectious diseases, under the care of health authorities; it is hoped that then something will be accomplished toward stamping out a malady which has already caused untold woe, both to the innocent and those guilty of sexual transgressions.

The general fact is already well known to the profession, in a general way, that syphilis is not always a venereal disease—that is, that it is not always acquired in impure sexual intercourse. But I think that the relative frequency of the different modes of infection is not sufficiently well known, and is not adequately considered in practice.

While syphilis still stands, as it has stood for many centuries, preëminently a venereal disease, the records of the past are very full of facts concerning its innocent transmission, and literature contains accounts of dozens of epidemics, large and small, involving thousands of persons who have acquired the disease innocently. There may also be found reports of individual cases, also aggregating thousands, where syphilis has been communicated by ways and methods which could hardly have been before suspected, and yet all in a perfectly innocent and unblamable manner.

It is not a little startling to hear so high an



authority as Fournier declare, as he has recently done, from a careful study of his cases in private practice,<sup>1</sup> that in about twenty-five per cent. of all cases of syphilis in females, the disease is innocently and undeservedly acquired; and in the discussion on his paper, Ricord stated that his experience would fully corroborate the statement.

The proportion of cases of *syphilis insontium* in males is probably smaller than in females, but that the disease is not infrequently acquired by males in a most blameless manner is abundantly shown by a study of literature, and will also be seen by what shall follow.

In looking over the records of patients which have passed under my care in public and private practice, I find notes, more or less complete, of something over fifteen hundred individuals with syphilis. The larger share of these came under my care on account of skin lesions during the various periods of the disease, more commonly after the primary sore had disappeared, and in some instances even many years thereafter; and but a certain proportion of them came on account of the local sore, or even with its remains still present. In the greater number of instances no record whatever was made, either of the location or the character of the primary lesion, or of the source of infection, if, indeed, it was known to the patient or to myself. So that it is impossible to draw any definite conclusions in regard to the exact proportion of cases of *syphilis insontium* among them.

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<sup>1</sup> Fournier, Annales de Dermat. et de Syph., tome viii. No. 12, 1887, p. 757.

But among these fifteen hundred cases, notes of extra-genital chancres occur in sixty-six instances, or in 4.4 per cent. of all cases of syphilis; in most of these patients the sore was acquired in a perfectly innocent and unsuspected manner, quite unconnected with any venereal transgressions; of these sixty-six cases of extra-genital chancres, the larger number occurred in males, namely, thirty-four to thirty-two females.

Examining now more carefully the records of about four hundred cases of syphilis in private practice, I find that just one-third of all patients were females, and of these, over ten per cent. had hereditary syphilis; it further appears that in a very considerable share of the rest of the cases the disease was acquired in an innocent and perfectly unsuspected manner, generally from husbands, and in a number of unmarried females from lovers by means of kissing. It may be stated that in at least forty per cent. of the cases alluded to, of syphilis in females in the private practice of the writer, the evidence is as good as it is possible to furnish, that the disease was acquired innocently and undeservedly. Surely such an unnecessary amount of sickness and suffering calls for a consideration of the means by which it may be avoided.

Returning to the cases of extra-genital chancre before alluded to, they may be tabulated as follows:

## PERSONAL CASES OF EXTRA-GENITAL CHANCRE.

Location.	Male.	Female.	Total.
Chancre of the lip . . .	13	18	31
" " finger . . .	6	1	7
" " breast . . .	—	6	6
" " tonsil . . .	2	3	5
" " tongue . . .	3	2	5
" " cheek . . .	3	—	3
" " chin . . .	1	1	2
" " eyelid . . .	2	—	2
" " nose . . .	1	—	1
" " ear . . .	1	—	1
" " hand . . .	—	1	1
" " forearm . . .	1	—	1
" " sacral region . . .	1	—	1
Grand total . . .	34	32	66

Time will not permit here of a report of these cases in full, which will be given at a later date, as they are full of points of the greatest interest; some of the more important or peculiar cases will be mentioned later in the further illustration of our subject.

Turning now to the consideration of the "unusual methods of acquiring syphilis"—that is, by means other than by venereal contact—we find from a study of the thousands of cases recorded in literature, that the methods of transmission may be conveniently classed under three main groups, in each of which literally dozens of sub-groups, or separate modes of infection, may be made out; the limits of the paper permit of but the most brief allusion to the main groups, and some of the data falling under them.

Thus, non-venereal infection of syphilis may take place as:

I. *Syphilis economica*, where in the ordinary economic relations of domestic and industrial life the

disease is transmitted, innocently, from one person to another.

II. *Syphilis brephotrophica*, where the disease is acquired by or from infants, in connection with their nourishment and care.

III. *Syphilis technica*, where the opportunity for the transference of the poison occurs in connection with various forms of body-service, medical and surgical, or of like nature.

We may now briefly consider a few of the details of these classes.

#### I. SYPHILIS ECONOMICA.

This is a very large class, and includes three main groups: 1, domestic transmission; 2, industrial transmission; and, 3, personal transmission.

1. *Domestic transmission*. All are familiar with many of the ordinary modes of the reported communication of syphilis by means of spoons, knives, forks, cups, glasses, and jugs. Tobacco pipes have been very frequently the means of carrying the infection, as has been repeatedly observed, especially in families or communities living rudely together, where one pipe may serve for several persons. In the following case, now under treatment for chancre on the lip, this seems to have been the method of communication:

CASE I.—Mr. F., aged fifty-one years, while living in a mining camp in California, received a blow on the under lip, in November, 1888, about six weeks previous to coming to the Skin and Cancer Hospital, January 2, 1889. The blow caused but little trouble, there being no outward injury, but only an abrasion within, caused by the patient's teeth. He



was in the habit of smoking various pipes lying around in an assayer's office where he worked, resting the pipe on the affected lip, the action of sucking bringing the bruised part in contact with it. As some of the men frequenting the office were known to have sores in the mouth, it is supposed that the poison was readily conveyed on one or more of the pipes to the surface abraded by the injury. A week or two after the bruise the surface became again sore, and soon an induration appeared, and ten days later submaxillary adenopathy. The sore was cauterized several times, but failed to heal, and he came East for treatment.

When first seen the lesion was something over an inch in cross diameter, and occupied the inner half of the lip almost to the gum, in the centre; the raw surface secreted a glairy fluid, and induration was well marked. There was some general adenitis and a maculo-papular eruption, which had existed about a week. Under active antisymphilitic treatment the eruption soon disappeared and the sore healed.

Cigars have also been reported by several observers as a means of conveying the syphilitic poison, both after having been smoked by another, and also when fresh from the manufacturer. Some time ago<sup>1</sup> the writer reported two cases of chancre of the lip in physicians, where this appeared to be undoubtedly the mode in which infection occurred, and it is hardly necessary to repeat the observations here. Another case, less certain, has since been under observation and treatment.

Various articles of personal apparel, such as shirts, drawers, pantaloons, and handkerchiefs, have been known to transmit the syphilitic poison from one

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<sup>1</sup> Archives of Dermatology, 1879, vol. v. p. 343.

person to another, and the following interesting personal case shows how wearing of the article on a single occasion, in this instance a bathing suit, may suffice to inoculate the disease :

CASE II.—Mr. Y. E., aged forty-five years, a gentleman with a grown-up family, came to me on account of a diffuse maculo-papular syphilide, with general adenopathy. He was perfectly positive that he had had no venereal exposure in any manner whatever, and was shocked as well as indignant at the suggestion that he had syphilis, he having only very recently cautioned his son against sexual transgressions. He had no sore on the penis, and I searched a long time to find the site of entry of the poison, for the eruption was manifestly of such a recent syphilis that I felt confident that the chancre, or its well-marked remains, must be still present. The lips and cavity of the mouth were examined in vain, as also the fingers and all other portions of the body where one might expect to find such a sore.

On questioning still further as to whether he had not had some ulcerating spot on any portion of the body, he then called my attention to the sacral region, where he said that he had had a raw point for a number of weeks, which had been regarded as a simple ulcer, or as an epithelioma, by his family physician ; it had, however, been suspected to be a chancre by a surgeon in another city, just before his visit, and just after the eruption appeared.

On examining the region, there was found an ulcer, deep in the fold of the nates, about an inch behind the anus, which, when the parts were separated, presented a round, ulcerated surface, about half an inch in diameter, sharply defined and with a grayish-white base ; a distinct hardness could easily be made out on careful palpation.

The supposed and probable mode of infection

was very interesting. He had long had some itching in that region, even for years, and at times a fissure would form along the crack of the nates, which, he said, existed also just before the new lesion developed. Some six weeks before his visit he had been in bathing, and, quite contrary to his usual custom, he had worn a strange suit of bathing clothes, and on account of the itching in that region he had rubbed and scratched the part vigorously through the bathing trowsers: the sore developed a few weeks after this single wearing of the public bathing suit at Coney Island. It is easy to understand how a previous bather with mucous patches at the anus had left the secretions on the garment, and the exertions of rubbing the dampened cloth upon the fissure readily afforded the best possible opportunity for inoculation. The patient suffered from a pretty severe attack of syphilis.

Similar cases have been reported where the disease was communicated to the region of the anus by wearing the clothes of others.

In addition to wearing apparel, cases are on record where the poison has been conveyed on bedding and toilet articles, sponges, combs, tooth-brushes, and syringes; a case is also reported where an opera glass served as the conveyer of the virus, and Otis mentions a cane as the bearer of syphilitic contagion.

In the following case of chancre of the tongue, now under treatment, it seemed more than likely that the infection took place by means of pins, which the girl was in the habit of putting in the mouth, and carrying them just in the site where the chancre appeared.

CASE III.—Miss A. A., an intelligent and modest girl, aged twenty five, a saleslady in one of the large Sixth Avenue variety stores, noticed a small ulceration of the left side of the tongue about six weeks previous to her first visit, October 31, 1888; the glands beneath the jaw on that side began to swell two or three weeks later. When first seen there was a small induration at the left side of the tip of the tongue, with a fissure through its centre; beneath the tongue there were a few mucous patches. Under a soothing treatment the soreness increased, and the swelling and hardness augmented, until, three weeks later, it was the size of a hazelnut; talking and eating were decidedly painful, and mucous patches had developed in the throat; the submaxillary glands also increased much in size. She was then placed under antisyphilitic treatment, and at the present time the size and hardness of the lump have greatly diminished, as also the adenopathy. She has had very little eruption, except about the mouth, where a very characteristic flat papular syphilide still exists, rebellious to treatment, with occasional mucous patches.

After repeated questioning of her alone, I could not discover that she had been in any way exposed to syphilis; she lived quietly at home, and had no intimate gentleman acquaintances. I was led, therefore, to accept the probability that the poison was conveyed by means of pins which injured and inoculated the tongue, as she was in the habit of placing them in that side of the mouth, regardless of where she had obtained them.

Lint and plaster have also served to convey the syphilitic poison from one person to another, and a physician once told me that he had seen a patient in whom he believed the disease to have been received by means of caustic used on a former syphilitic sore;



it is not supposed that the caustic itself could convey the virus, which it would naturally destroy, but probably, as he believed, the virus had adhered to the caustic-holder in which the short bit of nitrate of silver had been inserted.

It is a little remarkable that after a very considerable search I have failed to find in journal or other literature a single authenticated case where syphilis has been acquired from privy seats and public urinals, which are popularly supposed to be a fruitful source of innocent infection; the matter is scarcely alluded to seriously by any writers, a striking illustration of the fallacy of popular impressions or beliefs.

2. *Industrial transmission.* The next sub-group of *syphilis economica* is that where the poison is acquired in *industrial transmission*, during or by means of various trades and occupations. This includes a large class of cases, many of which are recognized by everyone. Thus, the well-known glass-blower's syphilis has in times past been conveyed to many individuals by means of a common pipe employed; several small epidemics of this are reported, especially in France, and I have been able to collect a total of one hundred and sixty-two cases in which syphilis has been acquired in this manner. At one time, when from twelve to fifteen men were thus infected in one factory, five or six of their wives received the disease innocently, besides many children. Assayers and goldsmiths have also been thus affected from a blowpipe used in common, and an instance is reported where the entire family of a weaver received infection through a pipe in the mouth used to sprinkle cloth.

Musicians have acquired the disease through wind instruments, and a car conductor from a whistle borrowed from a syphilitic friend. In one instance, three furriers received syphilis by means of a thread drawn through the lips and bitten off, and tack nails passed from one mouth to another have also communicated the disease. Pens, pencils, paper-cutters, and lip glue have all been the means of transmitting syphilis, and in a single instance, not very well authenticated, a coin is said to have been the means of conveying the disease. It is not a little remarkable that not even an alleged case has been found where paper money has been the medium of infection, considering the condition of many bank notes and the frequent habit of wetting the finger when handling them. A recent journal has suggested a danger attendant on wetting postage-stamps on the lips, especially such as had been previously wet and partially attached to a letter for return postage; but no case illustrating this has been found in literature.

It is commonly supposed that laundresses are greatly exposed in washing for syphilitic subjects, but the instances on record where this is believed to have occurred are very rare, and some of these very dubious. The soaking and frequent boiling of the clothes, together with the soap used, suffice to dilute and kill the poison, and the constant placing of the hands in the water renders absorption difficult.

3. *Personal transmission.* The next subgroup of this class, namely, that of *personal transmission* by innocent means, covers but few varieties, but includes very many cases where the poison is acquired by means of kissing, biting, and during other non-

venereal relations. Next to the venereal act, kissing probably now affords a larger proportion of cases of syphilis than any other mode of transmission, and hundreds of instances from this cause may be found reported. Among the sixty-six personal cases of extra-genital chancre alluded to previously, no less than thirty-one, or nearly one-half, were on the lips; among them was a little girl, four-and-a-half years old, and also another, eleven years old, infected the one by the mother and the other by the father. There were several ladies infected by their lovers before marriage, and in the two following cases the poison was received, the one on the tonsil, and the other on the lip, both from the same man, who also came later under my care, and who married the second lady.

CASE IV.—Miss X. T., a most estimable young lady, aged thirty-two, had one of the most violent attacks of syphilis which I have ever witnessed, lasting over years, and producing serious later results, owing in part to imperfect treatment, as she lived some distance from the city. She came to me during an early general papular syphilitic eruption, with a chancre of the right tonsil of two months and a half duration. There was a considerable flat excavation of the tonsil, with decided hardness, and sub-maxillary adenopathy of that side. After the patient whose case is next narrated and her husband both came under my care, I found, on comparing dates, that he had been engaged to the first young lady during the very active stage of his syphilis, when the mouth was full of lesions, and that when the nature of the disease and its source were discovered, the engagement was broken off, and he very shortly became engaged to the next case, to whom he gave a chancre of the lip just after marriage.

**CASE V.**—Mrs. Z. G., aged twenty-four, became engaged to the gentleman above referred to shortly after his former engagement had been broken, and was married soon thereafter. Almost immediately after marriage a sore appeared on the lower lip which refused to heal, lasting two months, and was shortly accompanied by a general rash, loss of hair, bone pains, and general malaise. Later, she had a tubercular syphilide and recurrent nodes on different parts of the body. Her husband came under my care for a while some what later, with bone syphilis, and died subsequently in another city from kidney disease, which I had recognized as being probably syphilitic.

The following case of chancre of the lip is interesting, for the reason that the disease was contracted, not from a husband or lover, but from a female friend, who was also under my treatment for syphilis.

**CASE VI.**—Mrs. Y. F., aged twenty-six, lost her husband two months previous to her first visit. About the time of his death, and thereafter, she had much to do with a patient who was also under treatment at the Hospital, with a large papular syphilide of the forehead and cheeks and mucous patches on the lips and tongue. In her grief she kissed her friend repeatedly, and as a result came with a large chancre on the left side of the upper lip, which was followed by the development of full constitutional syphilis. When first seen, the sore was about three-quarters of an inch in diameter, circular, elevated, and with a distinctly sclerotic base; the submaxillary glands of the left side were also enlarged.

Biting and tooth wounds are also not infrequently followed by syphilitic inoculation, and a case is an



record where the disease was communicated intentionally by a bite, the giver being actuated by personal spite and hatred.

The following case illustrates the difficulties sometimes attending the diagnosis of such cases:

CASE VII.—Y. A., a printer, aged thirty-three, applied for the treatment of a greatly inflamed ear, which had been torn in a fight three weeks previous to his visit, it having probably been bitten. The surface had been much irritated by basilicon ointment and other applications, and when first seen the entire left auricle was greatly inflamed and covered with a dried, crusted exudation; the diagnosis of simple dermatitis was made, and palliative and soothing treatment adopted. Two weeks later it was recorded that the lesion had spread greatly, and then occupied a space three inches long by two wide, in front of and on the ear, extending down to the lobule. The surface was ulcerated and irregularly elevated, with considerable tumefaction of the edge; the ulcerative process extended on to the ear, and occluded the auditory meatus. The pain in the sore was very great, especially at night; mild, non-specific treatment was still continued. One week later the surface was suppurating freely, with florid granulations, and the pain was still intense at night, abating toward morning. The diagnosis of probable chancre was now made, and the former treatment stopped; a mild calomel ointment was applied, and mixed treatment given internally, with a mercurial purge. The ulcer improved almost immediately, and healed with remarkable rapidity. Some moderate hardness of the edges developed during healing. Just before it healed a large papular syphilide appeared, and, later, mucous patches, bone pains, and other syphilitic symptoms completed the history of constitutional syphilis.

In addition to kissing and biting, there belong in this class those cases where syphilis has been communicated from one person to another by scratching and pinching, also certain others where the disease has been acquired innocently, on other parts than the genital regions, by contact in bed with syphilitic individuals; likewise some others where contact in carrying a person has afforded the means of entrance for the syphilitic poison.

## II. SYPHILIS BREPHOTROPHICA.

Two great divisions are met within this group, relative to: 1, the nutrition of infants; and, 2, attendance upon them. Literature is very full of data bearing upon this branch of the subject, and many of the points connected with it are so familiar that they need only be mentioned. Happily, this mode of communicating syphilis is becoming more rare as its dangers are more recognized, and it could hardly be possible now to have such epidemics of syphilis from this source as have been reported in earlier times. Thus, in a little town in the southeast of France the celebrated "Pian de Nerac" occurred, in which more than forty women and children were infected with syphilis before the nature of the trouble was recognized, it all starting from a single syphilitic child.

But isolated cases are still constantly occurring, and among my sixty-six cases of extra-genital chancres are found six instances of chancre of the breast, and there were also at least four children known to have been infected from them. The following case illustrates the fact that infection may sometimes take place even when the nature of the disease is

known, and greater or less precautions are exercised against infection.

CASE VIII.—Mrs. X. M., a very intelligent patient, was obliged by the sudden death of her husband to take a strange child to nurse, when her own was but a few months old. Fearing contamination, she very carefully kept the strange child on one breast, while she sedulously gave the other alone to her own child. Within some weeks the foundling died, with fully developed hereditary syphilis, and the mother then gave both breasts to her own child. In the course of some weeks later the breast which had nourished the strange child became sore on the nipple, and the ulcer resisted treatment for a long time, so that after awhile her own child ceased to nurse from it, and was kept on the other breast alone. In the course of time the mother became affected with general symptoms, and applied for treatment with a well-marked papulo-tubercular syphiloderm. Her child soon developed syphilis also, but it was never learned where the poison entered. It is more than probable that the lesion was in the mouth and gave very little trouble, as is commonly the case in infants who acquire syphilis at the breast. The child, however, suffered severely from constitutional syphilis, and was under my care through a number of years, and had considerable bone disease.

Syphilis has frequently been communicated also by means of the hand-feeding of infants, and cases are on record where feeding-bottles, sugar-teats, spoons, cups, etc., have been the means of conveying the poison, which need not be dwelt on at present.

The ordinary care of infants also affords a frequent

opportunity for the interchange of syphilis between them and their attendants, in both directions. Various articles used in the nursery toilet have been reported as conveying syphilis, such as sponges, syringes, combs, napkins, etc.; and one infant acquired the disease from contact in a cradle with the lining which had become saturated with the secretions of a syphilitic child. Scratches and tooth wounds given by infants have also been known to communicate syphilis to attendants, while they in turn have not infrequently infected healthy children by fondling, by means of extra genital chancres in various locations. A number of cases are on record where attendants have acquired a chancre in the site where a syphilitic infant had rested in carrying; in one instance, reported by Waller, the attendant was seventy years of age.

### III. SYPHILIS TECHNICA.

This third main class of *syphilis intentum* embraces a large number of sub-groups, with a variety of individual methods of transmission of syphilis, in connection with the various forms of body service, medical and surgical, as also by nurses and attendants on those affected.

We find here three very distinct main divisions, according as, 1, when the operator is the victim; 2, when the operator is the syphilitic; and 3, when the operator is the medium.

1. *When the operator is the victim.* Physicians and others in the pursuit of their profession have, as is well known, acquired syphilis in almost numberless instances, and in the most unsuspected



manner, and it is hardly necessary more than to allude to the subject.

Cases are on record where the poison has been received by surgeons during operations, and also by anatomists during dissection; it is also not infrequently acquired during manipulative proceedings, and students and others at venereal clinics have contracted chancres on the fingers and elsewhere in the careless handling of syphilitic sores. Jullien<sup>1</sup> relates a case where an eminent specialist who had a slight bleeding wound on the finger was called upon to examine a chancre on the upper surface of the glans penis. He held the wounded finger carefully aloof from the sore, but during the examination he found that there was a second chancre of the scrotum which had just come in contact with the finger which he had striven to protect. Realizing the danger he at once washed carefully and thoroughly cleansed the part, but all in vain, as a chancre formed on the wounded finger and the syphilis ran its course. Dentists have also been reported to be infected in practising their profession.

The largest numbers of syphilitic inoculations in this group are furnished by accoucheurs and midwives, and very many instances of this nature are recorded in literature.

In the list of extra-genital-chancres already given, there are found seven cases of chancre of the finger, five of which occurred in physicians. The following case is of peculiar interest, inasmuch as the sufferer also infected his wife, although he had exer-

<sup>1</sup> Jullien, *Traité pratique des mal. ven.*, 2d ed, Paris, 1886, p. 537.

cised as he thought, the utmost caution against such a misfortune.

CASE IX. — Dr. X. C., aged thirty-one, first noticed a soreness about the base of the nail of the third finger of the left hand during the latter part of June, 1884; this increased in severity until a chancre of some size developed, which remained, though partially healed, at the time of his visit in September of the same year. He had had only local applications, including burning with nitrate of silver.

Ten days before his visit a slight eruption had appeared upon the forehead, which increased, so that when he presented himself most of the body was covered with a characteristic maculo-papular syphilide; there was also malaise, with aching in the limbs which he had considered malarial and had treated with quinine. There were also very general adenopathy and soreness of the throat just beginning, and later he had a severe iritis and other symptoms of constitutional syphilis. When first seen the entire end of the finger was thickened and red, the nail raised from its bed, and at its root an ulcer was seen circular in shape, presenting an almost healed, purplish, glazed appearance. The infection was traced to a confinement case about a month previous to the appearance of the sore, when a hydrocephalic child was delivered dead born of a mother whom he believed to be syphilitic.

Almost six months after the first visit of Dr. X. C., he brought his wife to me with a fading maculo-papular syphilide: presenting very characteristic lesions about the mouth and chin, with mucous patches abundant in the throat, and general adenopathy. The history was that nearly two months after her husband's first visit she had begun to feel poorly, with malaise and bone-ache, until about a month later she took to the bed, with what was

suspected to be typhoid fever by several physicians who saw her. A slight eruption had appeared on the abdomen and chest, which was regarded as an usual form of the typhoid exanthem. A month after the time that she took to bed the throat began to be sore, and soon the glands in the neck became enlarged.

No clew could be found as to the method by which she received the poison; she had no initial lesion on any external part of the body or buccal region, nor could any trace of a primary sore be found in the genital region or vagina, even by a well-known gynecologist, who examined deeply for it. The case might possibly lend weight to the supposed communication of syphilis by the seminal fluid, and her husband, who had studied the case carefully, suggested that infection might have occurred through a pregnancy, as it was thought that she possibly might have had a miscarriage very early in conception, as there was at the time a delay in her menses, but of this they could not be certain.

In one of the instances of chancre of the finger in the list, the infection occurred on the third finger of the right hand in a lady who had taken all the care of a relative who had an ulcerative disease about the eye, changing the dressings, etc., during six or seven months; during this period the finger became sore at the root of the nail, and as the ulcer healed she had a general eruption, with malaise, bone-aching, etc., followed also by later manifestations of constitutional syphilis.

Physicians and attendants upon syphilitics have also received the infection in other regions than the fingers, and cases are on record where chancres have thus occurred on the eyelids, nostrils, and lips, from

conveying the poison on soiled fingers or otherwise, and more than one instance has been reported where the patient has projected the virus by coughing in the face of the physician, and chancre of the eyelid or elsewhere has resulted. One case is on record where a physician acquired a chancre of the tonsil by practising artificial respiration with the mouth on a syphilitic child. Many instances can be found where individuals have become infected by sucking recent wounds, and also by breast-drawing with the mouth.

2. *When the operator is the syphilitifer.* In this instance the operator having syphilis communicates his own disease to another by means of some body service. The number of reported cases falling under this category is very large, and come under a variety of heads. We have already seen that accoucheurs and midwives often contract syphilis in their calling; and, on the other hand, numerous instances are on record where they have been the means of spreading the disease to others, and even in large numbers. The celebrated epidemic of St. Euphrasie in France was of this nature. A midwife acquired a chancre on the right index finger, followed by a full attack of constitutional syphilis. She continued her calling for four months and communicated syphilis to more than fifty women, and through them at least thirty others were infected. In another epidemic in France over one hundred were thus infected with syphilis, and very recently Klein has reported an epidemic in England in which thirty married women, nine husbands, and two infants



contracted syphilis, directly or indirectly, from a diseased midwife.

The operation of breast-drawing by the mouth has also in times past proved a very fruitful opportunity for the intercommunication of syphilis; we have already mentioned the acquiring of syphilis by the operator in this manner, and there are abundant instances on record where the disease has by this means been conveyed to numbers of innocent victims. As early as 1654 an event of this nature was reported, where a professional breast-drawer infected many nursing women with chancre of the breast, and these in turn gave syphilis to their nurslings, who again communicated it to others. Although this practice is less common in this country and among the more highly civilized people than among the peasantry of European countries, yet cases of this nature still occur here and there, and at times breast-drawing by the mouth has given rise to epidemics of syphilis of considerable size. Leloir<sup>1</sup> has reported an epidemic of this nature occurring as late as 1880, where a woman acquired a chancre of the lip and she infected four women on the breast, who in turn gave syphilis to three nursing infants, one of whom, as also one of the women, died of the disease; one of these infants infected its father through the nursing bottle, and another infant gave the disease to its wet-nurse, who again transmitted it to her own infant.

Among the more curious and unexpected methods of communicating syphilis innocently may be mentioned the practice, sometimes followed, of remov-

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<sup>1</sup> Leloir: *Leçons sur la Syphilis*, Paris, 1886, p. 54.

ing foreign bodies from the eye by means of the tip of the tongue. In two small villages in Russia, Tepljaschin<sup>1</sup> found, among a population of 532 persons, no less than sixty-eight individuals, twenty-three males and forty-five females, who were affected with syphilis, about one-quarter of them being under ten years of age. One-half the entire number had been infected directly by a female quack, who had followed the industry of removing foreign bodies from the eye, and treating trachoma, with the tongue. The woman had herself received the disease in her calling and had continued to spread the same. A number of single instances of the same method have been recorded, and of these at least two<sup>2</sup> have been reported in this country.

Syphilis has also been communicated by means of the sucking of recent wounds, as we have also seen that it may be acquired by the operator in this manner.

Tattooing is now well recognized as one of the avenues through which the syphilitic virus may be accidentally introduced, and a total of no less than seventy-five cases of this nature have been found, reported by a number of different observers. As is well known, the poison is commonly, if not always, supplied from mucous lesions in the mouth of the operator, by means of the saliva used to moisten the needles or ink during the operation.

Among the personal cases of extra-genital chancre before alluded to, there was one where the dis-

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<sup>1</sup> Tepljaschin: Cited in Viertelj. f. Derm. u. Syph., 1887, p. 1138.

<sup>2</sup> Cited by de Beck, Hard Chancres of the Eyelid and Conjunctiva, Cincinnati, 1888, p. 48.

ease was undoubtedly received in this manner through a tattoo on the right forearm.

3. *When the operator is the medium.* Our last group of cases comprises those where the operator serves as the medium to convey syphilis from one person to another, by means of various forms of body service. A large number of instances are on record where this has happened, and many of the facts are well known to all and need but to be mentioned.

Vaccination is, perhaps, one of the most widely recognized instances coming under this class, the first authentic cases being reported by Marcolini as occurring in Lombardy in 1814, in which out of forty subjects vaccinated from a child with inherited syphilis almost all were infected. Hundreds of cases have been reported since that date, many of these occurring in epidemics of some size; thus, at Schleimitz and St. Vait in Styria, Koccevar reported an infection of sixty-six persons, of whom thirty-one were vaccinees, from whom nineteen mothers, and eleven others, including children, received syphilis. The epidemic at Rivalta, Italy, is a well-known instance of this mode of infection.

Ritual circumcision has also furnished numbers of victims of syphilis, who commonly receive the infection by the practice of staunching the blood by the mouth of the operator. The first reported cases of this occurred in 1805, since which time many observers have reported cases, and on one occasion, referred to by Jaffe,<sup>1</sup> thirty boys were inoculated by one operator in Vienna.

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<sup>1</sup> Jaffe: *Die rituelle Circumcision, etc.*, Leipzig, 1886.

Injuries made by dental instruments have been reported by several observers to be followed by syphilis at the site of injury; in these instances, the supposition is generally that the poison had been conveyed by the instrument which had received it from mucous lesions or blood from the mouth of a syphilitic person, it not always having been sufficiently cleansed. Roddick<sup>1</sup> reports a case where a chancre formed at the site of extraction of a tooth, the gum being considerably lacerated in the operation.

The following very interesting case illustrates the inoculation of syphilis following a wound by a dental instrument in the tongue.

CASE X.—Mr. X. W., a gentleman of intelligence and position, aged sixty years, came to my office on account of a sore on the tongue which he feared to be a cancer. The history was that, ten weeks before his visit, he had first noticed a little point of soreness on the tongue, which had gradually increased in size, in spite of treatment at the hands of another physician, who had evidently not recognized its character, until latterly it had come to give him so much annoyance that he was conscious of its presence at all times.

On examination there was found on the right side of the tongue, about an inch from the tip, a hard, inflamed mass, nearly half an inch in diameter, ulcerated in the centre, and with the edges somewhat everted. It was not ordinarily painful, except when irritating food or drink touched it; there was already a small, enlarged and painful gland beneath the jaw on that side. Thinking that possibly the

<sup>1</sup> Roddick: *Montreal Medical Journal*, vol. xvii. No. 2, 1888, p. 93.

lesion might be due to local irritating causes, he was given a soothing mouth-wash, and an alkali internally. Five days later there was a marked improvement; he had had some roughened teeth smoothed off and had left out his set of artificial teeth. The ulcer then looked less irritated, but its margin was more clearly defined, and the edge harder, the sub-maxillary glands of that side were more swollen and hard.

The diagnosis of chancre of the tongue was then recorded, and he was placed upon anti syphilitic treatment, under which the sore rapidly improved; some days later a general maculo-papular eruption appeared, affecting even the palms, with other signs of constitutional syphilis. The ulcer healed rapidly and in six weeks there was only a scar with slight hardness at its base.

In searching for the mode by which the syphilitic poison gained entrance, it was learned that during the month or so previous to the occurrence of the tongue chancre he had been, through the persuasion of a friend, under the care of a dentist of a cheaper, advertising order, who, he had noticed, was not at all cleanly in his person or instruments. He could not determine accurately the date of particular injury of the tongue, but work had been done in that portion of the mouth, and he remembered having the instrument slip occasionally. The patient was a married man, with a family, and had certainly not been exposed in any other manner; he was repeatedly questioned on this point, and was himself anxious to learn how he had acquired the disease.

The probability is very strong, therefore, that the poison was conveyed on the dental instrument from some preceding patient who had active syphilitic lesions in the mouth. The likelihood of such exposure and contamination of dental instruments in the hands of those who are careless as to cleanliness



is very great, and is illustrated by the fact that this very patient, while under my observation, and before the nature of the ulcer on the tongue was determined, and while it was secreting freely, had himself been to another dentist and had had the teeth adjoining the ulcer filed and polished. Too great care can hardly be exercised in warning patients with active mouth lesions of syphilis, or indeed all those in the early, infectious period of the disease, against exposing others in this manner.

In earlier times, and especially in rustic communities, the operation of wet cupping has on repeated occasions given rise to syphilitic contagion, and a number of epidemics of this nature are on record; the earliest of these is the celebrated "*Maladie de Bruun*" in Moravia, in 1178, where no less than eighty persons were infected in three months by this means, in addition to about one hundred in the surrounding country. In Finland repeated epidemics have occurred from this cause, and in one instance nearly two hundred persons were infected.

Minor surgical operations, such as opening abscesses, scarifying a hydrocele, the use of setons after circumcision, and also skin-grafting, have all given rise to chancres at the site of the wound, followed by constitutional syphilis.

Razor wounds also, have not infrequently afforded an opportunity for the entrance of the syphilitic poison, the inoculation occurring possibly during shaving, possibly afterward from other sources.

Among the personal cases of extra-genital chancre already referred to, occur three striking cases illustrative of this mode of infection, and a fourth one, not quite so certain. One of these, which is

of special interest from the intense severity of the subsequent syphilis, will suffice to illustrate the subject.

CASE XI.—Mr. XX., a druggist, aged thirty-three years, unmarried, came to my office in 1882, on account of a general eruption of a papulo-squamous character, covering almost the entire body and extremities. Although he had been exposed he had never contracted any venereal disease, and at the time of his visit there was no trace of a chancre on the penis or elsewhere, except as to be mentioned.

Upon the left cheek, however, there was a sore which at once attracted attention, and which proved to be a chancre, with the following history:

He had always been shaved at barber-shops, by different persons, using the public brushes and cups indiscriminately. About two and a half months before his visit his cheek had been cut by a new barber, who, he noticed, was uncleanly in his person and habits, and who shortly left the employ. A pimple soon formed on the site of the injury, which was again cut from time to time by the razor, and the place covered with court plaster; the sore enlarged, and later the crust was allowed to remain upon it. Some weeks later he had a chill, followed by pains in the bones, for which he took quinine; the submaxillary glands of that side began shortly to swell, and a little later the general eruption appeared, with which he presented himself.

When first seen there was on the left cheek, not far from the angle of the mouth, and about an inch from the angle of the jaw, an ulcerated surface, circular in shape, and about three-quarters of an inch in diameter, slightly raised, and with a raw, succulent surface, in which many hairs still stood, partly covered with a crust; the lymphatic glands beneath the jaw, on the left side, were as large as

small almonds, and some smaller ones were felt in front of the neck. The entire body, head, and limbs were covered with a brownish-red, papulo-squamous syphilide of very characteristic appearance; the throat was very sore from abundant mucous patches.

The subsequent course of the disease was very distressing; the cutaneous lesions were very severe and prolonged; he had an intense choroiditis, and at times active nervous symptoms, having once also a perfect locomotor ataxia; this latter yielded, as did other syphilitic phenomena, to active treatment, but for over two years, while under observation, he had as severe symptoms of syphilis as are often seen, rendering him helpless on several occasions. Six months after his first visit—that is, nine months after infection—it was recorded that the glands beneath the jaw were still swollen, and the mark of the chancre was still plainly visible on the left cheek.

Surgical sounds and specula are credited with having produced syphilitic inoculation, and in one particular instance, namely, Eustachian catheterization, this has been the source of repeated infection. No less than twenty-five different persons have reported one or more cases of this nature, and of these cases, about sixty were traced to the practice of a certain ear specialist in Paris. Some instances of this mode of infection have also been reported in this country.

Time does not permit of the further elaboration of this most interesting and important subject of the acquiring of syphilis by means other than venereal. But from this hasty, and by no means complete sketch of some of the recorded methods and instances of the communication of syphilis in the

various walks and occupations of life, as also from the illustrations given, it is seen that the disease by no means deserves to be classed always as a venereal affection, nor are the sufferers from it always to be looked upon as guilty of sexual transgressions; syphilis occupies an important place, not only pathologically, in the great mass of diseases affecting the human race, but also practically as one which may at any time affect the most innocent and the least suspecting.

Syphilis has been found to attack the young and old alike, irrespective of age or condition, and in all the many instances or classes alluded to, quite independently of any venereal act or possibility. As each new case or series of cases comes to light, it becomes more and more probable that the number of instances in which syphilitic infection has thus innocently occurred is much greater than is commonly imagined. The total number of innocent victims actually mentioned in connection with about one hundred and fifty epidemics, large and small, of *syphilis insontium*, amounts to some thousands, while thousands of separate cases of extra-genital chancre are also found scattered through literature.

When we consider the immense numbers of syphilitic patients seen every year in the public clinics of the world, most of them living without any restraint upon their actions, even during the most contagious period of the disease, it can readily be understood that the liability for others to contract the disease innocently is by no means slight. With a poison so freely secreted from mucous lesions, and so virulent, and capable of being transported and introduced in so many different ways, and, as far as is known, en-

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dowed with the possibility of being preserved for an indefinite period, the only wonder is that cases of non-venereal communication of syphilis are not even more frequent than they are now known to be.

The subject of the prevention of syphilis is, therefore, surely one which calls for serious attention, and one which claims the best thought, both of the profession and of the community.

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